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**NATIONAL TICK
SURVEILLANCE PROGRAM**
Calendar Year 1971

Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Prepared by
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Animal and Plant Health Inspection Service
UNITED STATES DEPARTMENT OF AGRICULTURE
Hyattsville, Md. 20782

NATIONAL TICK SURVEILLANCE PROGRAM CALENDAR YEAR 1971

During calendar year 1971 the collection and submission of ticks from native and imported animals were 40 percent greater

than for 1970. There were 4,247 species collections in 1971, compared with 3,025 in 1970.

TROPICAL BONT TICK SITUATION ON ST. CROIX

An active campaign was waged against *A. variegatum* after it was initially detected on St. Croix in August 1967. The treatment phase of the tropical bont tick program was terminated in May 1970 after only one infestation of *A. variegatum* (a single male) was collected on St. Croix in 1969. No infestations were detected in 1970. However, in March 1971 another collection, consisting of a single male specimen, was found on a sheep at the abattoir. Inspection of all livestock on the farm of origin resulted in

the detection of two more male ticks, one on a cow and one on a sheep. In January 1972 infestations were found on sheep and goats on two additional farms which adjoined each other and were located within a short distance of the first farm.

It is still not known whether these infestations of *A. variegatum* constitute a reintroduction of the tick from adjacent infested islands or whether they are a continuation of the original infestation.

BOOPHILUS OUTBREAK IN CAMERON COUNTY, TEXAS

In 1971 a serious outbreak of cattle fever ticks occurred in Cameron County, the most southerly county in Texas, which lies adjacent to the Mexican border. Part of Cameron County is included in the quarantine zone or systematic area which serves as a barrier to prevent the introduction of *Boophilus* ticks from the infested area of Mexico. The quarantine zone is a narrow strip which lies along the Rio Grande River and stretches from the mouth of the Devil's River (Amistad Dam), just north of Del Rio, to the entrance of the Rio Grande into the Gulf of Mexico, a distance of approximately 450 miles.

The winding course of the Rio Grande causes this area to contain 1400 miles of river frontage. This area must be systematically patrolled on horseback or by motor vehicle to detect and prevent the entry of stray livestock or illegal movements from cattle fever-tick

infested areas of Mexico. A force of approximately 60 inspectors is assigned to the quarantine zone. Each inspector is responsible for a strip of river frontage 20 to 25 miles in length.

In the 1971 Cameron County outbreak, cattle fever ticks were found on 31 premises and an additional 22 premises were exposed. Early in the outbreak, the eastern half of Cameron County was placed under a blanket quarantine by a proclamation from the Governor of Texas. Animals on the infested and exposed premises were dipped according to the regulations of the Texas Animal Health Commission.

Since the initial infestation was detected on cattle as the result of an inspection at an auction market, all cattle in markets in the general area were chute-inspected for several months. No additional cattle fever ticks were found at livestock markets.

As a result of the Cameron County outbreak, a total of 88 premises in 11 counties in Texas were infested or exposed. Fortunately, only one premises outside of Cameron County was found to be tick-infested. This premises was in Hidalgo County which adjoins Cameron County. All evidence indicates that the Cameron County outbreak has been contained.

In the remainder of the quarantine zone, exclusive of the area of the Cameron County outbreak, 29 native herds were found infested with fever ticks. This number of herds is considerably higher than is normally

encountered. In all cases the required tick eradication procedures were carried out and there was no indication of spread of cattle fever ticks to areas outside the quarantine zone.

The effectiveness of the quarantine zone in preventing the reintroduction of cattle fever ticks into Texas and the Southeastern United States is readily measured by the fact that, except for small isolated outbreaks which were rapidly detected and eradicated, cattle fever ticks have not been successful in re-establishing themselves in the United States since the quarantine zone was established along the Rio Grande in 1938.

ARGAS PERSICUS FOUND IN MARYLAND AND PENNSYLVANIA

Two premises were found infested with *Argas persicus*, the fowl tick, in 1971. One collection was from Shippensburg, Pa., and the other was from Calvert County, Md. Rarely has this species been collected by animal health personnel in the past 11 years. One wonders if the decreased use, in recent years, of persistent pesticides such as lindane and DDT has resulted in an increased incidence of this parasite. Prior to the introduction of these pesticides, the fowl tick

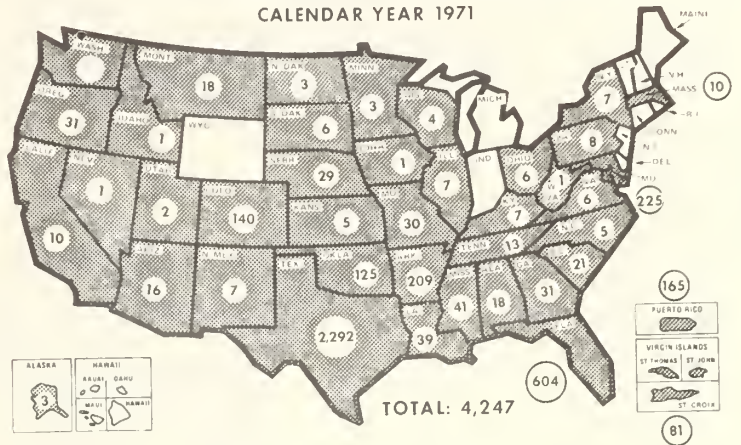
was a common and serious parasite in some areas of the Southern and Southwestern United States.

The Maryland infestation is especially interesting because of the unusually high death losses in the small farm flock. The owner reported that he lost 85 percent of 100 young pullets within one month after they were placed in the very heavily infested poultry house. All clinical signs indicate that the birds died of tick paralysis.

REPORT OF ALL TICKS COLLECTED
CALENDAR YEAR 1971

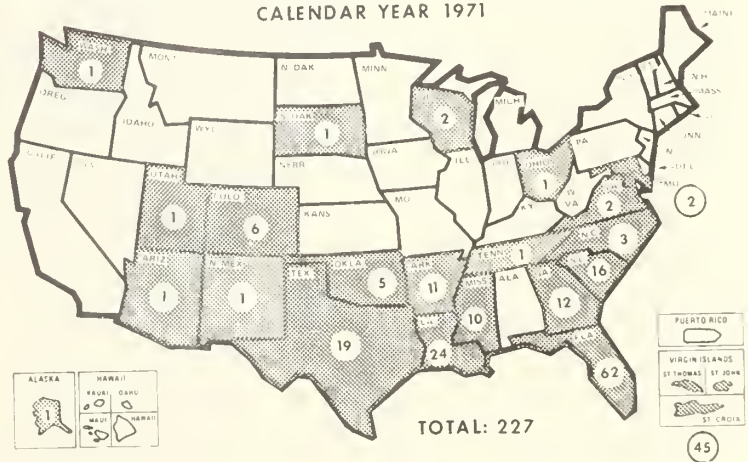
STATE	TOTAL	CATTLE	DOGS	HORSES AND MULES	ZOO ANIMALS and MISC.	NATIVE WILDLIFE	ANIMALS OFFERED FOR ENTRY
TOTAL	4,247	2,326	483	824	210	227	177
Alabama	18	13	2		3		
Alaska	3			1	1	1	
Arizona	16	7			1	1	7
Arkansas	209	153	30	3	12	11	
California	10	3			2		5
Colorado	140	22	86	8	18	6	
Connecticut							
Delaware							
Florida	604	57	14	461	6	62	4
Georgia	31	12	3		3	12	1
Hawaii							
Idaho	1		1				
Illinois	7	2			4		1
Indiana							
Iowa	1	1					
Kansas	5	1			4		
Kentucky	7		4		3		
Louisiana	39	10	2		1	24	2
Maine							
Maryland	225	5	183		33	2	2
Massachusetts	10	7			1		2
Michigan							
Minnesota	3		3				
Mississippi	41	23	4		4	10	
Missouri	30	15	10		5		
Montana	18	3	1	13	1		
Nebraska	29	13	15		1		
Nevada	1	1					
New Hampshire							
New Jersey							
New Mexico	7	5	1			1	
New York	7						7
North Carolina	5	2				3	
North Dakota	3	2			1		
Ohio	6	2			3	1	
Oklahoma	125	99	5	5	11	5	
Oregon	31	6	9	3	13		
Pennsylvania	8	6			2		
Rhode Island							
South Carolina	21	1		3	1	16	
South Dakota	6	5				1	
Tennessee	13	10	1	1		1	
Texas	2,292	1,736	67	262	62	19	146
Utah	2		1			1	
Vermont							
Virginia	6	2	1	1		2	
Washington	16	1	9	3	2	1	
West Virginia	1		1				
Wisconsin	4		1		1	2	
Wyoming							
Puerto Rico	165	102	8	52	3		
Virgin Islands	81	18	2	8	8	45	

TICK COLLECTIONS FROM ALL HOSTS
CALENDAR YEAR 1971



DEPARTMENT OF AGRICULTURE VETERINARY SERVICES ANIMAL AND PLANT HEALTH INSPECTION SERVICE

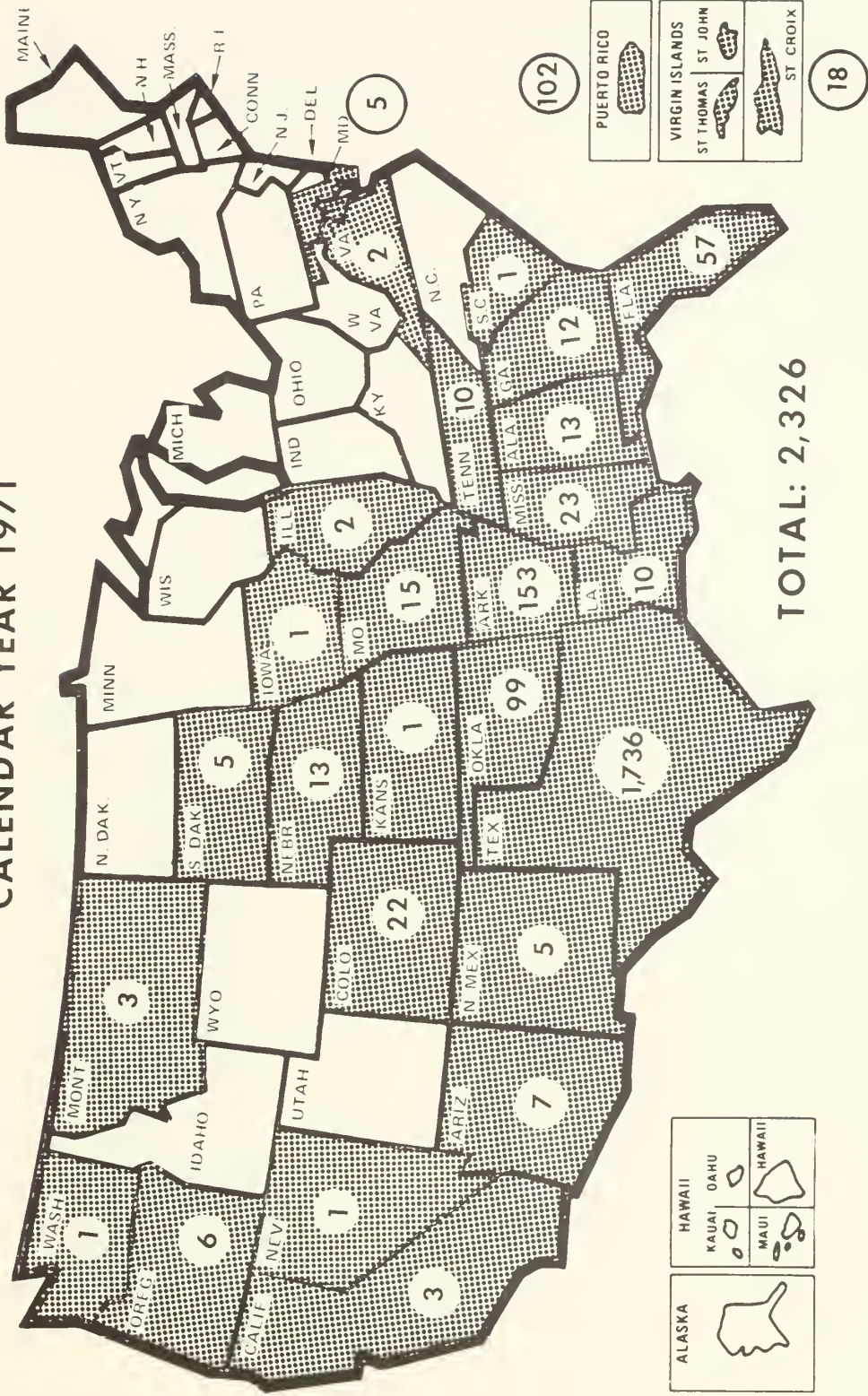
TICKS COLLECTED FROM NATIVE WILDLIFE
CALENDAR YEAR 1971



DEPARTMENT OF AGRICULTURE VETERINARY SERVICES ANIMAL AND PLANT HEALTH INSPECTION SERVICE

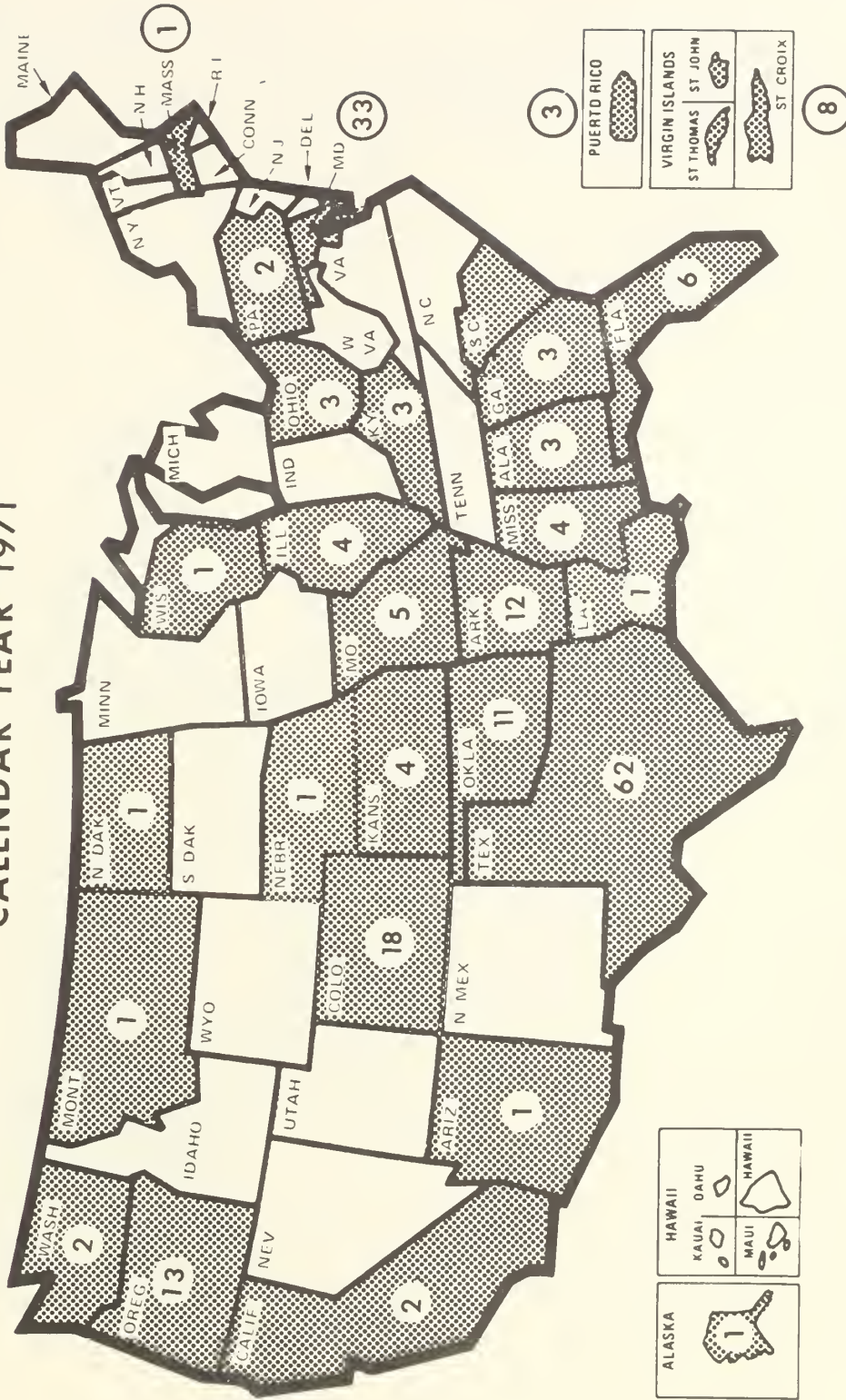
TICKS COLLECTED FROM CATTLE

CALENDAR YEAR 1971



TICKS COLLECTED FROM ZOO ANIMALS AND MISCELLANEOUS HOSTS

CALENDAR YEAR 1971



STATE	REPORT OF TICKS COLLECTED																			PERIOD		HOST ZOO ANIMALS and MISCELLANEOUS HOST (Human, Sheep, etc.)							
	TOTAL	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	CALENDAR YEAR 1971								
TOTAL	210	59	3	--	13	11	3	--	4	--	--	22	--	5	1	56	1	--	--	3	10	1	3	3	12	--	--		
Alabama	3				1Q																2C								
Alaska	1																											1X	
Arizona	1																												
Arkansas	12	1X	7Q	1SH												1X	1Q											1X	
California	2															1H	1C												
Colorado	18											7H	3Q															1Q ^b	1X
Connecticut																													
Delaware																													
Florida	6					11C ^e																						1Y	
Georgia	3	1Q																											
Hawaii																													
Idaho																													
Illinois	4					11BA ^e																							
Indiana																													
Iowa																													
Kansas	4				1H																								
Kentucky	3	1X																											
Louisiana	1																												
Maine																													
Maryland	33	3H	3C			1BA ^e	1CH																					1Q	
Massachusetts																													
Michigan																													
Minnesota																													
Mississippi	4	1H																											
Missouri	5	2H	1X																										
Montana	1																												
Nebraska	1	1Y																											
Nevada																													
New Hampshire																													
New Jersey																													
New Mexico																													
New York																													
North Carolina																													
North Dakota	1																												
Ohio	3																												
Oklahoma	11	2Y	1H																										
Oregon	13					11K	1BA					3SH	4H																
Pennsylvania	2							2CH																					
Rhode Island																													
South Carolina	1																												
South Dakota																													
Tennessee																													
Texas	62	4Y	1C	9Q	17H	3Q	9Q	2H	2H																				
Utah																													
Vermont																													
Virginia																													
Washington	2																												
West Virginia																													
Wisconsin	1																												
Wyoming																													
Puerto Rico	3																												
Virgin Islands	8					1SH ^o																							

Key to Host

BA Boa Constrictor
 BH Bighorn Sheep
 C Cat
 CH Chicken
 H Human
 IG Iguana
 P Pangolin
 Q Host Not Given
 RT Rat (Mouse)
 SH Sheep
 ST Sooty Tern
 T Tortoise
 TT Two Toed Sloth
 X Inanimate Object
 Y Swine

Key to Species

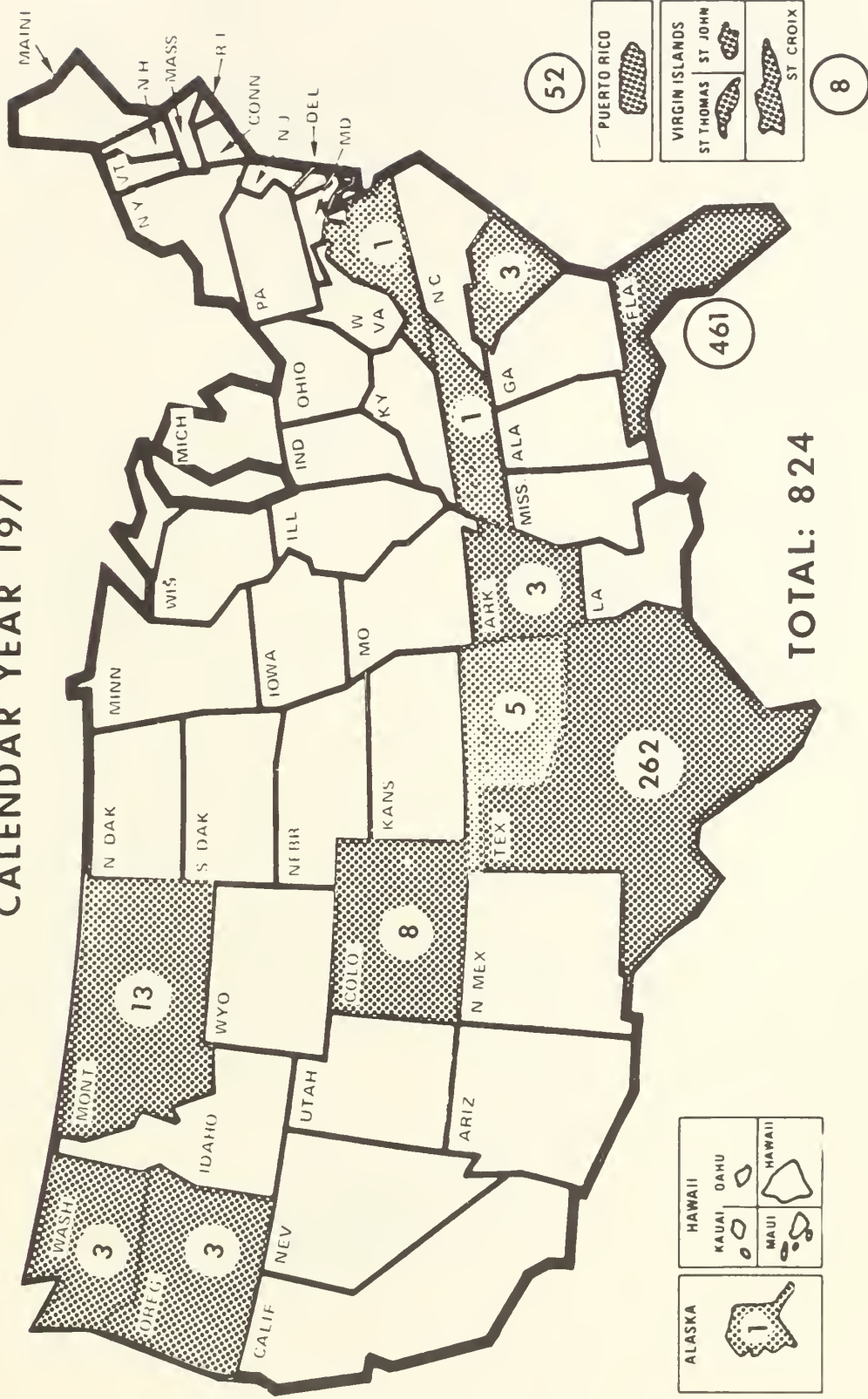
a Dermacentor hunteri
 b Ixodes kinki
 c Amblyomma disimile
 f Amblyomma varium
 g Amblyomma javanense
 j Ornithodoros rufus
 k Amblyomma sparsum
 o Amblyomma variegatum

STATE	REPORT OF TICKS COLLECTED																PERIOD	HOST												
	TOTAL	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	AMBL.YOMMA	CALENDAR YEAR 1971	DOGS											
TOTAL	483	62	2	--	4	2	--	--	--	--	--	34	--	--	--	230	--	--	2	10	9	9	--	18	101	--	--			
Alabama	2															2														
Alaska																														
Arizona																														
Arkansas	30	11														14												5		
California																														
Colorado	86	1											32			2				1			2	3 ^c	3 ^b	14	28			
Connecticut																														
Delaware																														
Florida	14															5						5						4		
Georgia	3															3														
Hawaii																														
Idaho	1																									1				
Illinois																														
Indiana																														
Iowa																														
Kansas																														
Kentucky	4															4														
Louisiana	2																											2		
Maine																														
Maryland	183	30														146				1								6		
Massachusetts	7															7														
Michigan																														
Minnesota	3															1						2								
Mississippi	4	1			1											2														
Missouri	10	5														5														
Montana	1											1																		
Nebraska	15															14										1				
Nevada																														
New Hampshire																														
New Jersey																														
New Mexico	1																											1		
New York																														
North Carolina	2	1														1														
North Dakota	2															2														
Ohio	2															2														
Oklahoma	5	2														1						1					1			
Oregon	9															1						6						2		
Pennsylvania	6															1					1							4		
Rhode Island																														
South Carolina																														
South Dakota																														
Tennessee	1															1														
Texas	67	11	2		3	1 ⁿ	1 ^m									14						1						34		
Utah	1																											1		
Vermont																														
Virginia	1															1														
Washington	9											1				1						3			1		1	2		
West Virginia	1																											1		
Wisconsin	1																											1		
Wyoming																														
Puerto Rico	8																												8	
Virgin Islands	2																												2	

Key to Species
b Ixodes kingi
c Ixodes holotisus
n Amblyomma ovale
m Amblyomma inornatum

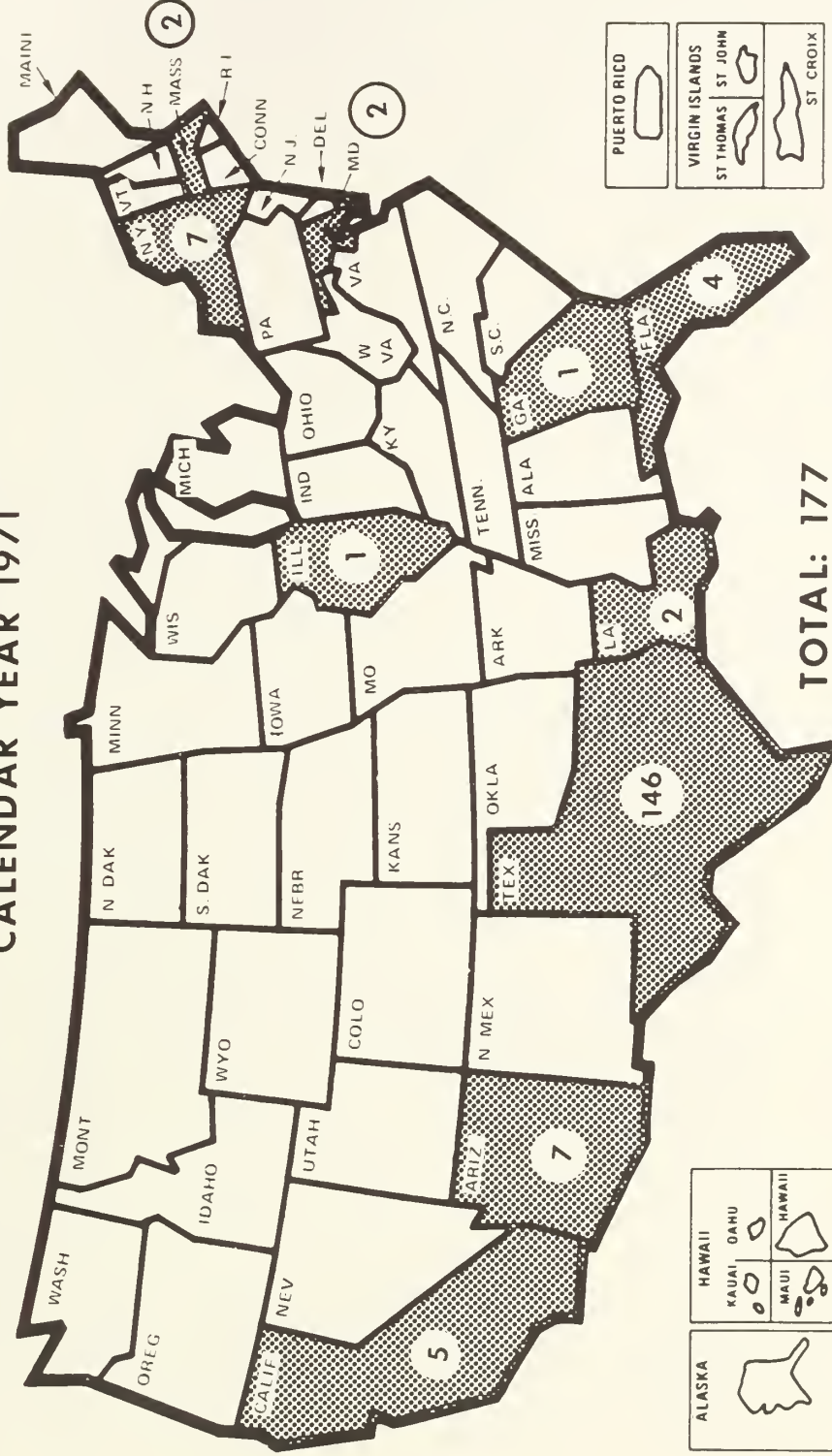
TICKS COLLECTED FROM HORSES AND MULES

CALENDAR YEAR 1971



STATE	REPORT OF TICKS COLLECTED																PERIOD	HOST										
	TOTAL	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	AMBL.YOMIA	CALENDAR YEAR 1971	HORSES & MILES									
TOTAL	824	23	15	2	162	1	--	28	5	1	31	15	10	229	--	228	--	--	--	--	63	--	--	9	2	--	--	
Alabama																												
Alaska	1											1																
Arizona																												
Arkansas	3	3																										
California																												
Colorado	8											2	4													2		
Connecticut																												
Delaware																												
Florida	461	2			138							2	5	149		102						59			3	1		
Georgia																												
Hawaii																												
Idaho																												
Illinois																												
Indiana																												
Iowa																												
Kansas																												
Kentucky																												
Louisiana																												
Maine																												
Maryland																												
Massachusetts																												
Michigan																												
Minnesota																												
Mississippi																												
Missouri																												
Montana	13											7	6															
Nebraska																												
Nevada																												
New Hampshire																												
New Jersey																												
New Mexico																												
New York																												
North Carolina																												
North Dakota																												
Ohio																												
Oklahoma	5	1												1		1						2						
Oregon	3												3															
Pennsylvania																												
Rhode Island																												
South Carolina	3	1			1											1												
South Dakota																												
Tennessee	1																											
Texas	262	16	15	2	23	1		28	5	1	19		4	20		122						2			3	1		
Utah																												
Vermont																												
Virginia	1																											
Washington	3												2													1		
West Virginia																												
Wisconsin																												
Wyoming																												
Puerto Rico	52																											
Virgin Islands	8																											

TICKS COLLECTED FROM ANIMALS OFFERED FOR IMPORTATION CALENDAR YEAR 1971



REPORT OF TICKS COLLECTED														PERIOD		TICKS FOUND ON ANIMALS OFFERED FOR ENTRY INTO THE UNITED STATES																					
STATE	TOTAL	AMBLIOMMA AEGLESCALUM	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNENSE	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	AMBLIOMMA CALIFORNIA	CALENDAR YEAR 1971																						
TOTAL	177	1	3	--	1	4	--	32	15	31	62	--	1	1	1	1	1	5	--	--	--	--	--	--	5	6	6	2									
ARIZONA																																					
Douglas	5										580																										
Noales	1																																				
Tucson	1																	180 ^a																			
CALIFORNIA																																					
San Pedro	2					180 ^d																															
San Ysidro	3							1E										180																			
NEW YORK																																					
New York***	7					1p ^e																															
TEXAS																																					
Brownsville	15		180		180				880	580																											
Eagle Pass	31							1880	280	580	580							180																			
El Paso	30		1X					180			2680							280																			
Del Rio	4							380			180																										
Houston	1					1L																															
Laredo	39							980	580	2180	480																										
Presidio	26										2180		180					180																			
MISCELLANEOUS																																					
Atlanta, Ga.	1																																				
Baltimore, Md.	2	1X																																			
Boston, Mass.	2																	1TP																			
Chicago, Ill.	1																																				
Miami, Fla.	4		1X																																		
New Orleans, La.	2					1X																															

Key to Host

BU Cape Buffalo Skins
 BO Bovine
 E Equine
 SH Bighorn Sheep
 L Lizard
 F Pangolin
 v Host Not Given
 RU Misc. Zoo Ruminants
 SS Sheep Skins
 TP Tapir
 Z Zebra
 X Inanimate Object

Key to Species

a Dermacentor hunteri
 R Amblyomma javanense
 o Amblyomma variegatum
 q Ixodes truncatus
 r Rhipicephalus evertsi evertsi
 s Rhipicephalus evertsi mineticus
 t Rhipicephalus pulchellus
 u Haemaphysalis hystrix

***Include quarantine station in Clifton, N. J.